IDALL BENNETT & SHOUP, P.08 WEST 2" AVENUE, THIRD FLOOR ANCHORAGE, ALASKA 99501 (907) 278-8533 FAX (907) 278-8536

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A copy of Mr. Stapleford's report and C.V. is attched.

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TINDALL BENNETT & SHOUP, P.C. 508 WEST 2<sup>ND</sup> AVENUE, THIRD FLOOR ANCHORAGE, ALASKA 99501 (907) 278-8533 FAX (907) 278-8536 DATED at Anchorage, Alaska this \_\_\_\_\_\_day of October, 2006.

TINDALL BENNETT & SHOUP, P.C. Attorneys for Plaintiff

By:
David H. Shoup, ABA No. 8711106
Tindall Bennett & Shoup, P.C.
508 W. 2<sup>nd</sup> Avenue, 3<sup>rd</sup> Floor
Anchorage, AK 99501

Phone: 907/278-8533 Fax: 907/278-8536

E-mail: Shoup@Tindall-law.com

HEREBY CERTIFY that on this day of October, 2006, a true and correct copy of the foregoing was served by mail on:

James E. Torgerson Heller Ehrman LP 510 L Street, Suite 500 Anchorage, AK 99501-1959

Tindall Bennett & Shoup

EXHIBIT\_/ PAGE 2 OF 14 PAGES



# MICHAEL STAPLEFORD

# TECHNICAL AREAS OF SPECIALIZATION:

- Accident Reconstruction
- · Computer Modeling and Animation
- · Collision Repair Inspection
- Automotive Fraud Detection
- Vehicle Systems Analysis
- · Slip/Trip and Fall Analysis

# **EDUCATION:**

Bachelor of Science in Mechanical Engineering Cal Poly, San Luis Obispo (1986)

# Additional Training:

ICAR Certified, Automotive Collision Repair (2000)

ASE Certified in: Engine

Automatic Transmission Steering and Suspension

Brakes

A/C and Cooling Refinishing Structural Repair Non-structural Repair

Commercial Vehicle Accident Investigation Certificate, UC Riverside

Human Factors/Biomechanics Certificate, UC Riverside Vehicle Analysis for Automotive Repair Fraud, UC Riverside Crash Data Retrieval Certificate, Collision Safety Institute

PC Crash - Computer Crash Simulation

Certified Operator, English XL Variable Incidence Tribometer

Motor Vehicle Accident Reconstruction, SAE Professional Development Program

# REGISTRATION:

Registered Professional Engineer, California Number M32051

## PROFESSIONAL EXPERIENCE:

Staff Engineer, Vollmer-Gray Engineering Laboratories, Inc. (September 2003 to present). Accident reconstruction, collision repair inspections, automotive fraud detection, vehicle inspection and systems analysis, industrial equipment accidents, construction accidents, slip/trip and fall analysis, illumination testing, building code compliance, product safety analysis.

EXHIBIT.



# Testimony of Michael Stapleford as of October 11, 2006

Lab No.	Dato	Case Manna	•		
040095		Case Natile	Case No.	Anna	Attorney
	373/2004	3/3/2004 Garda vs. Home Depot	TC016971	Los Angelas County	Sidney Mendlovitz
040951	1/21/2005	1/21/2005 Quero vs. Patel dba, 99 Cent Stores	RK387145	Riverside County	Christian Wilbert
030910	1/26/2004	1/26/2004 Wiggins, et al. vs. Foot Locker	02CC18388	Orange County	Levitt & Leichenger
040625	9/23/2004	9/23/2004 Brown vs. The Village at Orange	04CC04804	Orange County	Ludwig Law Center
0 <del>5</del> 0018	6/9/2006	5/9/2006 Nyugen vs Ford	04CC10508	Orange County	Egerman & Brown
040544	11/8/2004	11/8/2004 Mendoza vs. Munoz	GC032312	Los Angeles Northeast Dist.	Richardson, Bambrick, et al
050068	3/14/2005	/2005 Williams vs. Nunez, et al	04CC04219	Orange County - Central	Zurawski & Chase
050238	5/25/2005	5/25/2005 O'Keefe vs. Rech, et al	04CC06549	Orange County - Central	Maguire & Associates
050151	8/4/2005	8/4/2005 Guevara vs. Glendale Mitsubishi	BC315607	Los Angeles County	Brennan, Wiener & Simons
050494	1/20/2006	1/20/2006 Glenn-Thomas vs. Wageman	PC035982	Los Angeles County - Chalsworth	Ford, Walker, Haggerty & Behar
			ARBITRATIONS	SNC	
Lab No.	Date	Case Name	Case No.	Venue	Attorney
040213	\$126/2004	5/25/2004 Tillman vs. Exchange	G2889513	Eos Angeles County	Gilbert, Keily, Crowiey & Jennett
040494	7/1/2004	7/1/2004 Modjaz vs. Exchange	-		Gilbert, Kelly, Crowley & Jennett
060745	9125/2006	9/25/2006 Llamas vs. Farmers insurance		Los Angeles County	Early, Masiach & Oelze
					:
			TRIALS		
Lab Mo.	Date	Case Name	Case No.	Venue	Judge Name
N/A	5/5/2003	5/5/2003 Chan vs. Serramonle	SCN-104981	San Mateo Co.	
NA	50XX	dx/03 Chan vs. Serramonte	SCN-104981	San Mateo Co.	
031148	340/2004	2004 People vs. Paz	3CR12038	Los Angeles County	
040507	7720 & 7/21/04	People vs. Rodriguez	48AT02139	Los Angeles County	Charles G. Rubin
040658	10/6/2005	10/6/2005 People vs. Hodge	YA054615	Los Angeles County	ปีจาก Mason
050505	7728/2006	7/28/2006 De La Cruz vs. Berrio	LC070861	Los Angeles County	
050547	9/28/2005	9/28/2005 People vs. Gregozo	YA060691	Los Angeles County	Eric C. Taylor
050372	7720/2005	7720/2005 Railla vs. Huxley	BC310773	Los Argeles County	
040625	11/10/2004	11/10/2004 Brown vs. The Village at Orange	04CC04804	Orange Counfy	Derek G. Johnson
060018	7720, 7721, 8/4/06	Nguyen vs. Ford	04CC10608	Orange County - Central Justice Center	Michael Brennan



# **FEE SCHEDULE**

	CONSULTING (per hour)	TESTIMONY (2-hour minimum)
Carrie Henger	\$100.00	\$150.00
Isaac Ikram	\$150.00	\$200.00
Christopher Brignola	\$150.00	\$200.00
Anthony LaPallo	\$150.00	\$250.00
Michael Stapleford	\$200.00	\$250.00
Philippe Van Herle	\$210.00	\$260,00
Bruce J. Agle	\$210.00	\$260.00
lan Morrison	\$225.00	\$275.00
Paul Guthorn	\$250.00	\$300.00
Gerald Zamiski	\$250,00	\$300,00
Ned Wolfe	\$275.00	\$325.00
Cory Gray	\$275.00	\$325.00
Reuben Vollmer	\$275.00	\$325.00
	***	
Technician		\$50.00 per hour
Delivery		\$25,00 per hour
Mileage		\$.60 per mile
Photos, mounted		\$2.09 each
Digital prints		\$2,00 each \$20,00 per CD
Color copies		\$1.00 per page

NOTE: All time is charged portal-to-portal from Long Beach. There is a 2-hour minimum for deposition, arbitration and trial testimony. Compensation for services performed will not be contingent upon the necessity of client to receive payment from other parties. All items stored on our premises are subject to a storage fee,

Effective 1/1/06

Photographic expense

Read and correct depo transcript

\$1.00 each

One minute per page



# LABORATORY NUMBER 050320

# ENGINEERING ANALYSIS IS REQUESTED BY:

**Anchor Realty** 2525 Gambell Street Suite 307 Anchorage, AK 99503

Attention: John Estabrook

Michael Investments Reference: Paint Failure Subject:

2421 Palm Drive, Signal Hill, CA 90755 Tel: 562-427-VGEL (8435) Fax: 562-427-8434 www.vglabs.com

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August 21, 2006

Laboratory Number 050320

Reference:

Michael Investments

# **ENGINEERING ANALYSIS**

# INTRODUCTION

On May 5, 2005 an investigation was initiated with regard to paint issues (flat, peeling and bleeding through) on a building in Anchorage Alaska. The building had been primed and painted between July 18, 2003 and August 6, 2003. It was reported that the finish coat showed streaking and "flashing" before the job was complete. More coats of paint were applied, but the streaking continued to reappear and continued to do so at least until June of 2004. By that time other problems had become apparent, including staining of windows due to the discharge involved in the streaking, peeling and bubbling of the paint, and an excessively flat finish on the painted surface. The objective of this analysis was to determine the cause of the paint issues.

# BACKGROUND

Material samples remaining from the painting project were provided for analysis:

One sample of liquid paint that had been transferred into a 1-quart can. That paint was reported to be from a 5-gallon can marked "6430-0110 Dulux Fortis Ext Satin"

One sample from a 5-gallon can with a painted over label which was still partially legible and read in part "...1/2 Grey Lady Primer"

In this report, these are referred to as "subject paint" and "Grey Lady primer". A sample of dried paint and primer was also provided. It was reported to have been peeled from the building by hand.

2421 Palm Drive, Signal Hill. CA 90755 Tel: 562-427-VGEL (8435) Fax: 562-427-8434 www.vglabs.com

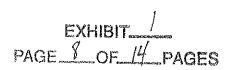


# INSPECTION

On June 4 and June 5, 2006, inspection and testing of paint and primer adhesion was performed on the building at 2525 Gambell Street in Anchorage, Alaska, also known as the RAM building. Evidence of the streaking was noted on the windows. This appeared as an oily-looking film. However, no material could be removed or detected by touch. The streaking on the paint itself was no longer visible, but the finish of the paint was consistently flat, giving the appearance of primer rather than a finish coat. Testing was performed using an Elcometer Model F106 adhesion tester per ASTM D4541. While performing the adhesion tests, evidence was found of previous testing by both the "Tape Pull" method defined in ASTM D3351 and by the method of ASTM D4541. Previous tests performed on the first and second floors were inspected to determine the results. Most of the visible test sites had de-bonding of the paint and primer from the building panels.

An example of a previous test that appeared to be per ASTM D4541 is shown in Figures 1 and 2. This test was on the east side of the building. It was noted that paint would peel away easily from around the test spot. A previous test performed per ASTM D3351 is shown in Figure 3. This test appears to have produced a "OA" result, which is removal of paint beyond the area of scoring. Other evidence of previous testing was noted at locations around the building, including on the exterior of the third, fourth and fifth floors.

The testing on June 4 and 5 of 2006 was performed on exterior panels on the first and second floors. Readings produced by the method defined in ASTM D4541 are in units of pounds per square inch (psi) and indicate the tensile stress sustained by the primer bond to the building panels. Readings ranged from a low of 190 psi to higher than 500 psi, the maximum reading the Model F106 can record. The lowest readings occurred on the south side of building. The paint/primer coating could be peeled from the side of the building in several spots, most of which were also on the south





side of the building, and in a few spots on the east side of the building. An area exhibiting severe peeling on the south side of the building is shown in Figures 4 and 5. The tape that was applied to the area was conventional masking tape used to identify test spots, and no scores had been made to the surface. On the north and east sides of the building, the paint could not be peeled off as a sheet in any of the areas tested. In general, the primer adhesion was better on the north and west sides of the building. Several of the test pucks could not be separated from the building at a tensile stress of 500 psi. When some of these were forcibly removed, the primer actually pulled the mineral coating away from the reinforced concrete of the panels.

Sheets of peeled paint/primer coating from the building were retained for chemical analysis. It was noted that after performing adhesion tests, it was possible to grasp the edges of the paint/primer coating surrounding the test spot, and pull away large sheets of the paint and primer coating. This was particularly the case on the south side of the building.

# **ANALYSIS**

Exemplar paint and primer that had been previously ordered was applied to an exemplar substrate. The subject "Grey Lady primer" and subject paint were also applied to an exemplar substrate. The substrate was fiberglass reinforced concrete with color impregnated mineral coating of the same manufacturer as the panels installed on the building. The samples were allowed to cure between and after coats for the time specified in the product instructions. The adhesion of the dried samples was then tested by tape pull per ASTM 3359. The results were:

Exemplar paint and primer:

5A - No peeling or removal

Subject paint and "Grey Lady primer":

0A - Removal beyond the area of the

scoring.

Samples of dried paint and primer which were peeled from various locations on the building were analyzed by FT-IR on both the paint side and primer side. Liquid samples of the

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subject and exemplar paint and subject and exemplar primers were also analyzed. The results of that analysis showed the following:

Primer side of dried samples from building Styrene-Acrylic Co-polymers

Carbonate + Silica

Paint side of dried samples from building Acrylics + Clay

Subject primer "Grey Lady" (liquid) Acrylics + Clay

Exemplar primer (liquid) Styrene-Acrylic Co-polymers +

Carbonate + Silica

Subject paint (liquid) Acrylics + Clay

Exemplar paint (liquid) Acrylics + Clay

The analysis determined that the dried samples were composed of paint and primer, and that the chemical composition of the primer was similar to the liquid exemplar primer.

# **DISCUSSION**

FT-IR analysis indicated that all of the dried samples removed from the huilding were composed of properly formulated primer covered by paint. The can marked "Grey Lady primer" was essentially paint, rather than primer. This is the reason for the failure of the subject "Grey Lady primer" to adhere to the exemplar substrate in laboratory testing. In contrast, the exemplar primer was able to establish a bond and adhere to the exemplar substrate.

Adhesion testing on the four sides of the building revealed that de-bonding and separation occurred overwhelmingly on the south side, with less on the east side and no notable debonding on the north and west sides. The south side of the building experiences the largest temperature swings of the four sides during summer months. The peeling is exacerbated by the greater thermal expansion of the coating relative to the fiberglass reinforced concrete panels.

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# CONCLUSION

The primer that is applied to the building appears to be properly formulated. The paint conforms to the specifications provided. This primer appears to have initially established adhesion, but did not maintain adhesion to the panels in specific areas. Most of the areas with a lack of adhesion are on the south side of the building. The peeling was likely caused by inability of the primer and paint coating to maintain adhesion during differential thermal expansion caused by changes in temperature.

At this time the reason for the flat finish, the recurring streaking on the painted surface and the staining on the windows has not been determined.

Respectfully Submitted,

Michael Stapleford Professional Engineer

California No. M32051

Gerald F. Zamiski, Ph.D Professional Engineer California No. MT 1851.

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Figure 1



Figure 2





Figure 3



Figure 4



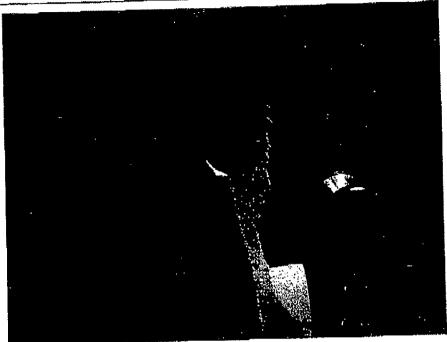


Figure 5